





FACTS

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## THE INLAND LAKES PROGRAM

Ontario has a quarter of a million lakes which are a source of enjoyment for thousands of cottagers, nature lovers and anglers. Pollution, however, is threatening the quality of many of these lakes.

The inland lakes program was established by the Ontario Ministry of the Environment in 1986 to protect threatened lakes and restore damaged ones. These goals will be achieved by identifying and reducing the various pollutants which degrade water quality and impair aquatic life.

The inland lakes program will lead to the development of specific management plans for each lake that is studied. These plans will set out controls and actions needed to restore the lakes to an acceptable state and, in the case of some lakes, to protect existing suitable conditions.

As part of this program, a data base that includes information on Ontario's lakes is being developed and expanded. Researchers will use this data base to select lakes for future studies and to provide baseline data with which to compare conditions in the future.

Specific research projects on several lakes experiencing a variety of water quality problems are currently underway.

The large lakes survey project includes assessment of water quality in Muskoka's four largest lakes (Lakes Muskoka, Joseph, Rosseau and Lake of Bays) and, more recently, two large Northern Ontario lakes -- Lake of the Woods and Lake Nipissing.

The Muskoka surveys found elevated levels of algal nutrients (phosphorus, nitrogen) in Gravenhurst and Muskoka Bays in Lake Muskoka. These studies confirm that effluent from the Gravenhurst sewage treatment plant is the cause of the elevated nutrient levels. However, with the exception of these two bays, the water quality in Lake Muskoka, Lake Rosseau, Lake Joseph and Lake of Bays was excellent.

One species of filamentous algae, which is often considered an early indicator of lake acidification, was found in three bays of Lake of Bays - Trading Bay, Rabbit Bay and Pancake Bay. This type of algae can foul swimming areas, reduce the appeal of shoreline areas and may affect fish and other lake life. A separate study is assessing both the extent of this filamentous algae in Ontario's lakes and possible means of controlling it.

Another project will determine the causes and extent of the apparent increase in algal blooms in the northern part of Lake of the Woods, and develop a remedial water quality plan.

The Lake Nipissing study will focus on nutrient enrichment in the lake. The ministry sampled Lake Nipissing during the spring and summer of 1988 and, based on its findings, will develop a comprehensive study to determine the status of the lake and means for protecting its recreational and fishery resources.

The Huntsville basin contaminants assessment project has been designed to identify the sources and extent of mercury pollution in the Huntsville lakes. Sport fish from Lakes Fairy, Vernon, Fox and Buck contain very high levels of mercury. Ongoing work includes an examination of mercury levels in other parts of the food chain, an evaluation of mercury mobilization from the surrounding terrain to these lakes and the distribution of mercury levels in lake sediments.

High nutrient (especially phosphorus) loadings to Rice and Sturgeon lakes in the Kawarthas contribute to dense weed and algae growth. The Rice and Sturgeon lakes project will determine the sources of these high loadings and develop lake management plans to reduce detrimental nutrient impacts on these lakes.

Phosphorus loading from sewage treatment facilities and farm runoff has been a well-documented problem in Lake Simcoe. Action has been taken to correct the situation, but monitoring and special studies are continuing to determine the rate of recovery and the possible need for further controls.

Controls for blue-green algae, which can affect the quality of drinking water, fisheries production and general enjoyment of a lake, are being assessed in several lakes and reservoirs in southern Ontario.

The Water Resources Branch is responsible for the co-ordination of the inland lakes program. However, staff with other ministry offices and other agencies are assisting in most of the projects described above. For more information, contact:

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